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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/915,967	07/26/2001	Dave Larson	4015-956	8294

27045 7590 01/13/2006

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EXAMINER

YANG, LINA

ART UNIT PAPER NUMBER

2665

DATE MAILED: 01/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/915,967

Applicant(s)

LARSON ET AL.

Examiner

Lina Yang

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/7/2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment filed 11/7/2005 have been entered and made of record.

Claims 1-11 have been amended. Claim 12 has been canceled. As a result, claims 1-11 are now pending in this application.

Response to Arguments

2. Applicant's arguments with respect to claims 1, 4, 5, 8 and 9 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

3. Claim 11 is objected to because of the following informalities.

Claim 11 recites: "The IP gateway of claim **7**" should be changed to "The IP gateway of claim **9**". Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351 (a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-2,4,5 and 8-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Schneider (U.S. Patent No. 6,570,871 B1).

Regarding claim 1, Schneider teaches a method of routing call data in a mobile communications system between two mobile switching centers (MSCs) (fig. 2), comprising:

receiving said call data (digital voice samples) at an IP gateway (74a in fig. 2 and fig. 8A and fig. 8B) from an associated source MSC (62a in fig. 2) via a trunk circuit (76 in fig. 2) (col. 7 lines 25-28 and 36-45; col. 16 lines 27-36);

packetizing said call data at said IP gateway (74a in fig. 2) for transmission over an IP network (72 in fig. 2) (col. 7 lines 45-51; col. 15 lines 16-23 and col. 16 lines 37-43);

determining the identity of the trunk circuit (by default);

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attaching an IP destination address to said packetized call data representing a destination MSC associated with the truck circuit (col. 15 lines 23-25; col. 7 lines 52-57 and col. 16 line 43);

attaching a source address identifying the source MSC (by default, the IP packet data has a packet header which always lists the source IP address, in this case, it is the IP address of the IP gateway 74a that associated with the MSC 62a); and

transmitting said packets over an IP network to the destination MSC (col. 15 lines 25-28 and col. 16 lines 43-50).

Regarding claim 2, Schneider further teaches that the method further comprising:

receiving one or more data packets from an IP network at an IP gateway (for example, 74b in fig. 2 and fig. 8A and fig. 8B) connected to the destination MSC (62b in fig. 2) by at least one trunk circuit (76b in fig. 2) (col. 16 lines 51-57);

assembling said call data from said received data packets (col. 15 lines 16-23 and col. 16 lines 57-61);

directing said call data to one of said trunk circuits based on the source IP address associated with said data packets (default, as there is one trunk circuit shown in fig. 2); and

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transferring said call data to the destination MSC (col. 15 lines 25-28 and col. 16 lines 62-64).

Regarding claim 4, Schneider teaches a method of routing call data between two mobile switching centers (MSCs) (fig. 2), comprising:

receiving one or more data packets from an IP network at an IP destination gateway (for example, 74b in fig. 2 and fig. 8A and fig. 8B) connected to a destination MSC (62b in fig. 2) by at least one trunk circuit (76b in fig. 2);

assembling said call data from said received data packets(col. 15 lines 16-23 and col. 16 lines 57-61);

directing said call data to a particular one of said trunk circuits, wherein the identity of the particular one of said truck circuit is based on a source IP address associated with said data packets (default, as there is one trunk circuit shown in fig. 2); and

transferring said call data to said destination MSC via said particular one of said truck circuits (col. 15 lines 25-28 and col. 16 lines 62-64).

Regarding claim 5, Schneider teaches a method of routing mobile communication system call data through an IP network (fig. 2), comprising:

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transmitting call data (digital voice samples) from a source mobile switching center (MSC) (example: 62a in fig. 2) to an IP source gateway (74a in fig. 2) on at least one trunk circuit connecting said source MSC to said IP source gateway (76a in fig. 2);

packetizing said call data at said IP source gateway (74a in fig. 2) for transmission over an IP network (72 in fig. 2) (col. 7 lines 45-51; col. 15 lines 16-23 and col. 16 lines 37-43);

determining the identity of the at least one trunk circuit (by default);

attaching an IP destination address to said data packets at said IP source gateway (74a in fig. 2), said IP destination address representing a destination MSC (example: 62b in fig. 2) associated with the at least one trunk circuit (col. 15 lines 23-25; col. 7 lines 52-57 and col. 16 line 43);

attaching an IP address associated with said IP source gateway to all said data packets (by default, the IP packet data has a packet header which always lists the source IP address, in this case, it is the IP address of the IP gateway 74a that associated with the MSC 62a); and

transmitting said data packets over the IP network (col. 15 lines 25-28 and col. 16 lines 43-50).

Regarding claim 6, Schneider further teaches that the method further comprising:

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receiving one or more data packets from said IP network at the IP destination gateway (for example, 74b in fig. 2 and fig. 8A and fig. 8B) connected to the destination MSC (62b in fig. 2) by a destination end of the at least one trunk circuit (76b in fig. 2);

assembling said call data from said data packets (col. 15 lines 16-23 and col. 16 lines 57-61);

directing said call data to one of said trunk circuits that is selected based on an IP source address associated with said data packets (default, as there is one trunk circuit shown in fig. 2); and

transmitting said call data from said destination IP gateway to the destination MSC via the destination end of the at least one trunk circuit (76 b in fig. 2) (col. 15 lines 25-28 and col. 16 lines 62-64).

Regarding claim 8, Schneider teaches a method of routing mobile communications system call data through an IP network (fig. 2), comprising:

receiving one or more data packets from said IP network at an IP destination gateway (for example, 74b in fig. 2 and fig. 8A and fig. 8B) connected to a destination mobile switching center (MSC) (62b in fig. 2) by at least one trunk circuit (76b in fig. 2);

assembling said call data from said data packets (col. 15 lines 16-23 and col. 16 lines 57-61);

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directing said call data to one of said trunk circuits, wherein identity of the one of said at least one trunk circuit is based on an IP source address associated with said data packets (default, as there is one trunk circuit shown in fig. 2); and

transmitting said call data from said IP destination gateway to said MSC (76 b in fig. 2)(col. 15 lines 25-28 and col. 16 lines 62-64).

Regarding claim 9, Schneider teaches an IP gateway (76 in fig. 2, and fig. 8A and fig. 8B) for providing virtual circuits for routing call data between mobile switching centers (MSCs) (62 in fig. 2) in a mobile communications system (fig. 2), comprising:

at least one trunk circuit (76 in fig. 2) connected between the IP gateway (74 in fig. 2) and a MSC (62 in fig. 2) in said mobile communications system, said at least one trunk circuit carrying said call data (data transmitted on 76 in fig. 2);

an IP interface connected to an IP network (router in fig. 8 A and fig. 8B; "to Internet");

a data packetizer (PAD 218 in fig. 8A and fig. 8B) for packetizing said call data received by said IP gateway for transmission over said IP network (col. 15 lines 16-23); and

means for attaching the IP gateway address and an IP destination address to said data packets, wherein said IP destination address is based on the identity of said at least one trunk circuit (by default when assigning the IP source and destination addresses to the IP data packet header).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3, 7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider (U.S. Patent No. 6,570,871 B1) in view of Kim (U.S. Patent No. 6,009,329 B1).

Regarding claim 3, Schneider teaches there is one T1 trunk line 76 between the MSC and the gateway (col. 14 lines 62-64). Schneider differs from the claimed invention in that Schneider does not specifically teach that at least one trunk circuit connecting said gateway to the source MSC comprises a plurality of trunk circuits. However, it is well known in the art that a MSC usually has many trunk circuits to connect to the outside. For example, Kim in his method of common usage of mobile switching centers teaches that a MSC has a plurality trunk circuits (plurality trunk links) (fig.1 and col. lines) to allow a device (a Base Station system in this case) connected to the MSC to hunt said plurality of trunk lines for available channels to carry calls. Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include a plurality of trunk circuits connecting the gateway to the source MSC,

as taught by Kim in the assembly of Schneider in order to have more circuits to transfer data more efficiently.

Regarding claim 7, Schneider teaches there is one T1 trunk line 76 between the MSC and the gateway (col. 14 lines 62-64). Schneider differs from the claimed invention in that Schneider does not specifically teach that the destination end of the at least one trunk circuit connecting the destination MSC to the IP destination gateway comprises a plurality of trunk circuits. However, it is well known in the art that a MSC usually has many trunk circuits to connect to the outside. For example, Kim in his method of common usage of mobile switching centers teaches that a MSC has a plurality trunk circuits (plurality trunk links) (fig.1 and col. lines) to allow a device (a Base Station system in this case) connected to the MSC to hunt said plurality of trunk lines for available channels to carry calls. Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include a plurality of trunk circuits connecting the gateway to the destination MSC, as taught by Kim in the assembly of Schneider in order to have more circuits to transfer data more efficiently.

Regarding claim 11, the modified assembly of Schneider and Kim further teaches that at least one trunk circuit connecting the IP gateway to the MSC comprises a

plurality of trunk circuits (by default, an IP gateway has a plurality of ports to connect to the other devices).

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider (U.S. Patent No. 6,570,871 B1) in view of Curry et al. (U.S. Patent No. 6,542,497 B1).

Regarding claim 10, in view of the above rejection for claim 9, Schneider further teaches that the IP gateway (74 in fig. 2, fig. 8A and fig. 8B), further comprising: a data depacketizer (PAD 218 in fig. 8A and fig. 8B) to assemble data packets received from said IP network into mobile communications system call data (col. 15 lines 16-23).

Schneider differs from the claimed invention in that Schneider does not specifically teach that IP gateway comprising a demultiplexer directing said call data to a particular one of said at least one trunk circuits, wherein the identity of the particular one of said at least one trunk circuits is identified by an IP source address associated with said data packets.

However, Curry teaches that IP gateway (packet service gateway 69 in fig. 3B) comprising a demultiplexer (mux/Demux 102 in fig. 3B) directing said call data to a particular one of said at least one trunk circuits, wherein the identity of the particular one of said at least one trunk circuits is identified by an IP source address associated with said data packets (col. 14 lines 62-63 and 66-67; col. 15 lines 1-3). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was

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made to include IP gateway comprising a demultiplexer directing said call data to a particular one of said at least one trunk circuits, wherein the identity of the particular one of said at least one trunk circuits is identified by an IP source address associated with said data packets, as taught by Curry in the assembly of Schneider in order to separate the incoming data into different output ports/different trunks which connected to different destination switching points.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. The amended claim(s) contains new scopes. Accordingly, **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

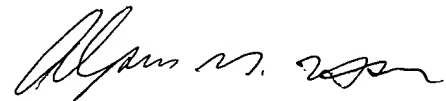
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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lina Yang whose telephone number is (571) 272-3151. The examiner can normally be reached Monday through Wednesday between 7:00 a.m. and 8:00 p.m. eastern standard time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LY



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PRIMARY EXAMINER